

## IN THE CLAIMS:

Please substitute the following claims for the same-numbered claims in the application:

1. (Currently Amended) A method for automatically learning consumer behavior, said method comprising ~~the steps of:~~

~~generating a hierarchical representation of relationships formed between an online merchant and a plurality of online parties, said representation based on referrals to said merchant of certain of said parties by other of said parties;~~

inputting a loaded shared business opportunity (SBO) tree, wherein said SBO tree comprises:

a root node corresponding to an online merchant, who offers promotional tools and SBOs to potential customers;

child nodes corresponding to first customers, who accepted said promotional tools and said SBOs offered by said online merchant;

grandchild nodes corresponding to second customers, who accepted said promotional tools and said SBOs offered by said first customers; and

leaf nodes corresponding to terminal customers, who accepted said promotional tools from parent customers associated with parent nodes of said SBO tree,

wherein each of said promotional tools is associated with a specific category of item;

obtaining data relating to all online transactions between ~~said parties and~~ said merchant and said first customers, said first customers and said second customers, and said terminal customers and said parent customers,

wherein said data comprises: customer identities; and past transactions, including redemption of specific promotional tools associated with a particular category of items by a customer associated with a particular node of said SBO tree;

~~processing said data; and~~

~~predicting consumer behavior of a target party based on selected data relating to at least~~

~~one party on a lower level in said hierarchical representation than said target party, said selected data selected from the processed data~~

selecting a particular transaction from said all online transactions;

identifying a particular node of said SOB tree, associated with said particular transaction by an identified customer;

identifying a parent node of said particular node of said SOB tree;

for each descendent node of said parent node, determining an applicability of a specific promotional tool to a particular category of items, based on said past transactions; and

outputting, to said merchant, a specific promotional tool to a particular category of items for a customer associated with said parent node, based on each applicability of a specific promotional tool to a particular category of items for each customer associated with each descendent node.

2-3. (Canceled).

4. (Currently Amended) The method of claim [[3]] 1, further comprising the further step of providing compensation to each ancestor of a ~~party~~ customer that performs [[a]] an online transaction with said merchant.

5. (Currently Amended) The method of claim 4, wherein said compensation comprises a share of ~~the~~ profit generated by said online transaction.

6. (Currently Amended) The method of claim 1, wherein said ~~selected data~~ further comprises ~~data relating to at least one~~ any of:

~~demographics of said at least one party~~ related to a customer; and

~~acquaintances of said at least one party;~~ related to a customer.

~~past transactions of said at least one party; and~~

~~clickstream patterns of said at least one party.~~

7. (Currently Amended) The method of claim 1, wherein said ~~online transactions comprise~~ redemption of a sales promotional tool ~~selected from the group of sales promotional tools comprising~~ comprises any of:

~~discount coupons valid for all items offered by said merchant;~~

discount coupons valid for a ~~selected group~~ particular category of items offered by said merchant;

~~discount coupons valid for a particular item offered by said merchant;~~

gift certificates valid for a particular category of items offered by said merchant; and

freebies valid for a particular category of items offered by said merchant.

8. (Currently Amended) The method of claim 1, wherein said ~~processing step comprises~~ applying at least one technique comprising determining an applicability of a specific promotional tool to a particular category of items comprises any of:

correlation analysis;

collaborative filtering; and

associative learning.

9. (Currently Amended) The method of claim 1, further comprising any of:

determining pricing for items offered by said merchant;

performing market segmentation of said ~~parties~~ customers;

identifying preferences of said ~~target party~~ customers;

~~identifying sales promotional tools relevant to said target party;~~

performing marketing targeted at an identified market segment;

~~performing marketing targeted at said target party;~~ and

maximizing [[the]] potential success of a promotional tool.

10. (Currently Amended) The method of claim 1, further comprising ~~the further step of~~ providing incentives to said ~~parties to form said relationships~~ customers to acquire descendent customers.

11-12. (Canceled).

13. (Currently Amended) A system for automatically learning consumer behavior, said system comprising:

~~at least one communications interface operable for transmitting and receiving data;  
a memory unit operable for storing data and instructions to be performed by a processing unit; and~~

~~a processing unit coupled to said at least one communications interface and said memory unit, said processing unit programmed to:~~

~~generate a hierarchical representation of relationships formed between an online merchant and a plurality of parties, said representation indicative of referrals to said merchant of certain of said parties by other of said parties;~~

~~obtain data relating to online transactions between said parties and said merchant;~~

~~process said data; and~~

~~predict consumer behavior of a target party based on selected data relating to at least one party on a lower level in said hierarchical representation than said target party, said selected data selected from the processed data~~

a memory that stores an inputted loaded shared business opportunity (SBO) tree, wherein said SBO tree comprises:

a root node corresponding to an online merchant, who offers promotional tools and SBOs to potential customers;

child nodes corresponding to first customers, who accepted said promotional tools and said SBOs offered by said online merchant;

grandchild nodes corresponding to second customers, who accepted said promotional tools and said SBOs offered by said first customers; and

leaf nodes corresponding to terminal customers, who accepted said promotional tools from parent customers associated with parent nodes of said SBO tree,

wherein each of said promotional tools is associated with a specific

category of item; and

a processor configured to:

obtain data relating to all online transactions between said merchant and said first customers, said first customers and said second customers, and said terminal customers and said parent customers,

wherein said data comprises: customer identities; and past transactions, including redemption of specific promotional tools associated with a particular category of items by a customer associated with a particular node of said SBO tree;

select a particular transaction from said all online transactions;

identify a particular node of said SOB tree, associated with said particular transaction by an identified customer;

identify a parent node of said particular node of said SOB tree;

for each descendent node of said parent node, determine an applicability of a specific promotional tool to a particular category of items, based on said past transactions; and

output, to said merchant, a specific promotional tool to a particular category of items for a customer associated with said parent node, based on each applicability of a specific promotional tool to a particular category of items for each customer associated with each descendent node.

14-15. (Canceled).

16. (Currently Amended) The system of claim ~~[[15]]~~ 13, wherein said ~~processing unit is further programmed to determine~~ processor is further configured to provide a compensation for each ancestor of a ~~party~~ customer that performs ~~[[a]]~~ an online transaction with said merchant.

17. (Currently Amended) The system of claim 16, wherein said compensation comprises a share of profit generated by said online transaction.

18. (Currently Amended) The system of claim 13, ~~at least one~~ wherein said data further

comprises any of:

~~demographics of said at least one party~~ related to a customer; ~~and~~  
~~acquaintances of said at least one party;~~ related to a customer.  
~~past transactions of said at least one party;~~ ~~and~~  
~~clickstream patterns of said at least one party.~~

19. (Currently Amended) The system of claim 13, wherein said ~~online transactions comprise~~ redemption of a sales promotional tool ~~selected from the group of sales promotional tools comprising~~ comprises any of:

~~discount coupons valid for all items offered by said merchant;~~  
discount coupons valid for a ~~selected group~~ particular category of items offered by said merchant;  
~~discount coupons valid for a particular item offered by said merchant;~~  
gift certificates valid for a particular category of items offered by said merchant; and  
freebies valid for a particular category of items offered by said merchant.

20. (Currently Amended) The system of claim 13, wherein said ~~online transactions comprise~~ redemption of a sales promotional tool ~~selected from sales promotional tools comprising~~ determining an applicability of a specific promotional tool to a particular category of items comprises any of:

correlation analysis;  
collaborative filtering; and  
associative learning.

21. (Currently Amended) The system of claim 13, ~~comprising~~ wherein said processor is further configured to perform any of:

~~determine~~ determining pricing for items offered by said merchant;  
~~perform~~ performing market segmentation of said ~~parties~~ customers;  
~~identify~~ identifying preferences of said ~~target party~~ customers;

~~identify sales promotional tools relevant to said target party;~~  
~~perform~~ performing marketing targeted at an identified market segment;  
~~perform marketing targeted at said target party;~~ and  
~~maximize the~~ maximizing potential success of a promotional tool.

22. (Currently Amended) The system of claim 13, wherein said ~~processing unit is further~~  
~~programmed to offer~~ processor is further configured to provide an incentive to said ~~parties to~~  
~~form said relationships~~ customers to acquire descendent customers.

23-24. (Canceled).

25. (Currently Amended) A ~~computer program product comprising a computer readable~~  
~~medium comprising a computer program recorded therein for learning consumer behavior, said~~  
~~computer program product comprising~~ storage device readable by machine, tangibly embodying  
a program of instructions executable by said machine to perform a method for automatically  
learning consumer behavior, said method comprising:

~~computer program code means for generating a hierarchical representation of~~  
~~relationships formed between an online merchant and a plurality of online parties, said~~  
~~representation based on referrals to said merchant of certain of said parties by other of said~~  
~~parties;~~

~~computer program code means for obtaining data relating to online transactions between~~  
~~said parties and said merchant;~~

~~computer program code means for processing said data; and~~

~~computer program code means for predicting consumer behavior of a target party based~~  
~~on selected data relating to at least one party on a lower level in said hierarchical representation~~  
~~than said target party, said selected data selected from the processed data~~

inputting a loaded shared business opportunity (SBO) tree, wherein said SBO tree  
comprises:

a root node corresponding to an online merchant, who offers promotional tools

and SBOs to potential customers;

child nodes corresponding to first customers, who accepted said promotional tools  
and said SBOs offered by said online merchant;

grandchild nodes corresponding to second customers, who accepted said  
promotional tools and said SBOs offered by said first customers; and

leaf nodes corresponding to terminal customers, who accepted said promotional  
tools from parent customers associated with parent nodes of said SBO tree,

wherein each of said promotional tools is associated with a specific  
category of item;

obtaining data relating to all online transactions between said merchant and said first  
customers, said first customers and said second customers, and said terminal customers and said  
parent customers,

wherein said data comprises: customer identities; and past transactions, including  
redemption of specific promotional tools associated with a particular category of items by a  
customer associated with a particular node of said SBO tree;

selecting a particular transaction from said all online transactions;

identifying a particular node of said SOB tree, associated with said particular transaction  
by an identified customer;

identifying a parent node of said particular node of said SOB tree;

for each descendent node of said parent node, determining an applicability of a specific  
promotional tool to a particular category of items, based on said past transactions; and

outputting, to said merchant, a specific promotional tool to a particular category of items  
for a customer associated with said parent node, based on each applicability of a specific  
promotional tool to a particular category of items for each customer associated with each  
descendent node.

26-27. (Canceled).

28. (Currently Amended) The ~~computer~~ program ~~product~~ storage device of claim [[27]] 25,



said method further comprising ~~computer program code means for determining~~ providing compensation for each ancestor of a ~~party~~ customer that performs ~~[[a]]~~ an online transaction with said merchant.

29. (Currently Amended) The ~~computer~~ program ~~product~~ storage device of claim 28, wherein said compensation comprises a share of profit generated by said online transaction.

30. (Currently Amended) The ~~computer~~ program ~~product~~ storage device of claim 25, wherein said ~~selected~~ data further comprises ~~data relating to at least one~~ any of:

~~demographics of said at least one party related to a customer; and~~  
~~acquaintances of said at least one party; related to a customer.~~  
~~past transactions of said at least one party; and~~  
~~clickstream patterns of said at least one party.~~

31. (Currently Amended) The ~~computer~~ program ~~product~~ storage device of claim 25, wherein said ~~online transactions comprise~~ redemption of a sales promotional tool ~~selected from the group of sales promotional tools comprising~~ comprises any of:

~~discount coupons valid for all items offered by said merchant;~~  
discount coupons valid for a ~~selected group~~ particular category of items offered by said merchant;  
~~discount coupons valid for a particular item offered by said merchant;~~  
gift certificates valid for a particular category of items offered by said merchant; and  
freebies valid for a particular category of items offered by said merchant.

32. (Currently Amended) The ~~computer~~ program ~~product~~ storage device of claim 25, wherein said ~~processing step comprises applying at least one technique comprising~~ determining an applicability of a specific promotional tool to a particular category of items comprises any of:

~~computer program code means for correlation analysis;~~  
~~computer program code means for collaborative filtering; and~~

~~computer program code means for associative learning.~~

33. (Currently Amended) The ~~computer program product~~ storage device of claim 25, said method further comprising any of:

~~computer program code means for determining pricing for items offered by said merchant;~~

~~computer program code means for performing market segmentation of said parties~~ customers;

~~computer program code means for identifying preferences of said target party~~ customers;

~~computer program code means for identifying sales promotional tools relevant to said target party;~~

~~computer program code means for performing marketing targeted at an identified market segment;~~

~~computer program code means for performing marketing targeted at said target party; and~~

~~computer program code means for maximizing [[the]] potential success of a promotional tool.~~

34. (Currently Amended) The ~~computer program product~~ storage device of claim 25, said method further comprising ~~computer program code means for providing incentives to said parties to form said relationships~~ customers to acquire descendent customers.

35-36. (Canceled).